



COLLEGE OF NATURAL SCIENCES
THE UNIVERSITY OF TEXAS AT AUSTIN

Astronomy Department • RLM 15.308 • Austin, Texas 78712-1083 • (512) 471-4461 • TWX 910-874-1351

25 November 1986

Prof. Carl Sagan
Astronomy Dept.
Cornell University
302 Space Sciences Building
Ithaca, New York 14853

Dear Prof. Sagan,

We met and chatted in your office 10 years ago on a snowy autumn day. (I think the data from Viking were still fresh!) I was applying to college from the Bronx High School of Science and I was considering Cornell - perhaps you remember.

I ended up at Harvard where I earned my BA in Physics (1980). I continued here, at the University of Texas, where I expect my PhD in Astrophysics in less than 2 months. (See attached news clipping for more detail.)

One of the many ways I earned money to support myself through graduate school was to become "Merlin" for the Star Date News (formerly the McDonald Observatory News). "Merlin's Words to the Wise" is a monthly, popular level Q & A column on astronomy and space that I have been writing for over three years.

I think I have composed enough material for a book. (My brother, Assist. Prof. of Art, University of Pittsburgh, has agreed to illustrate it.) In your experience with agents/publishers do you believe an astronomy Q & A book is a viable idea? If so, would you recommend for me an agent or publisher that might consider it.

I've enclosed a description sheet and a sample from the proposed manuscript for your reference.

Thank you for your time.
Respectfully,

Neil D. Tyson
Neil D. Tyson

- encl: 1) person. data sheet
2) outline
3) sample from manuscript
4) 2 issues of Star Date News

Astronomy TA brings fresh view to courses

By MIKE ZIMMERMAN
Daily Texan Staff

The people crowded into the Welch Hall classroom on this first night of summer have foregone TV, sports, movies or other common forms of entertainment. Instead, they anticipate a different kind of show tonight as they review for a test in Astronomy 301.

At 7 p.m. Neil Tyson, teaching assistant and master's candidate in the Department of Astronomy, comes "onstage" to perform for his students. As he moves rapidly about the room, Tyson combines the style of a good stand-up comic with his years of training in ballet, wrestling and basketball. He enjoys taking concepts such as microwaves and the inverse-square law and translating them into everyday metaphors. For example, he might demonstrate the Doppler effect by having students walk past each other while they mimic the sounds of racing cars; or he might wear a red T-shirt under infrared light to show how colors become invisible when exposed to their own wavelengths.

"It's like having Richard Pryor for a TA," says business freshman Donna Neider. "Neil loves to use down-to-earth examples to explain astronomical phenomena. He really complements the professor's style."

Frank Bash, professor of astronomy, agrees. "Neil has all the attributes of a born teacher," he says. "He's enthusiastic and has a great sense of humor, and I hope he continues to teach sometime in his career."

The 25-year-old Tyson began his career by searching for beauty in the skies above New York City, his hometown. "I couldn't see many stars there, but I could see the moon," he says. "The crescent moon, as seen through binoculars, struck me as very beautiful." Frequent visits to the famed Hayden Planetarium kept his interest going, but a vacation at the age of 13 with relatives in Puerto Rico proved a real turning point for him. "(In Puerto Rico) I really saw the stars for the first time, and they caught my imagination like nothing before," he says.

Tyson pursued his muse, paying for his first telescopes while still in junior high by walking dogs that lived in his apartment building. He attended the prestigious Bronx High School of Science and received a B.S. in Physics from Harvard in 1980.

His current research involves finding "dwarf" galaxies too dim to be seen with optical equipment under normal conditions. Existence of a certain quantity of these galaxies, he says, could indicate there is more matter in the universe than previously thought, perhaps enough for gravity to make the universe collapse upon itself in the far future.

"My sense of appreciation has been transformed where I can see not just the physical beauty of the sky but also the beauty in



Ken Ryall, Daily Texan Staff

Neil Tyson

the mathematical and mechanical procedures involved," he says. "I do enjoy teaching because I like to tell about what's happening, but research is my first priority."

Tyson's willingness for giving all the help he can to his students has gained him much friendship and respect, but he feels he is simply repaying a debt.

"When I was an undergrad, the TAs played more of a major role than the professors did. The TAs even acted as advocates to help raise the grades of deserving students. I feel it's my duty to be as helpful to my students as those TAs were to me," he says.

Linda Salinas, a junior in data processing, says, "Normally I'd run the other way from science, math or physics. But Neil's encouragement awakened my interest and motivation. He is not patronizing to us undergraduates ... he really cares." Salinas says her experience with Tyson's teaching encouraged her to take an upper level course for astronomy majors, which she passed with a grade of "B."

As Tyson explains, "I try to tell people who are 'freaked out' by astronomical concepts that science is not as intimidating as it looks ... I know everyone can't be as in love with astronomy as I am, but I want them to know why astronomers enjoy what they do and pass along my interest It takes more than introductory courses to achieve scientific literacy; nevertheless, teachers of science should spend time relating their courses to everyday things and issues.

"I really enjoy astronomy, even though there's little money in it," he says. "My interest keeps me going, and I have no complaints about doing what's needed to get the message across."